DEAV2003/0007 US NP

21

Patent Claims

We Claim:

1. A compound of formula I

5

10

wherein,

R1 and R4 are independently selected from the group consisting of H, F, Cl, Br, C_1 - C_4 -alkyl and C_1 - C_4 -alkoxy wherein, the C_1 - C_4 -alkyl and C_1 - C_4 -alkoxy are optionally substituted independently of one another by 1, 2, 3, 4, 5, 6, 7, 8 or 9 fluorine atoms;

R2 and R3 are independently selected from the group consisting of H, F, OH, C_1 - C_3 -alkyl, and C_1 - C_3 -alkoxy wherein, the C_1 - C_3 -alkyl and C_1 - C_3 -alkoxy are optionally substituted independently of one another by 1, 2, 3, 4, 5, 6 or 7 fluorine atoms;

15

R5 is independently selected from the group consisting of C_1 - C_4 -alkyl, C_2 - C_4 -alkenyl and C_3 - C_5 -cycloalkyl, wherein, the C_1 - C_4 -alkyl, C_2 - C_4 -alkenyl and C_3 - C_5 -cycloalkyl are optionally substituted by 1, 2, 3, 4, 5, 6, 7, 8 or 9 fluorine atoms; and

R6 and R7 are independently selected from the group consisting of H, F, Cl, Br, C₁-C₄-alkyl and C₁-C₃-alkoxy, wherein, the C₁-C₄-alkyl and C₁-C₃-alkoxy are optionally substituted independently of one another by 1, 2, 3, 4, 5, 6, 7, 8 or 9 fluorine atoms,

provided that R6 and R7 are not simultaneously hydrogen;

25

or the pharmaceutically acceptable salt, or trifluoroacetic acid salt thereof.

- 2. The compound according to claim 1 wherein,
- R1 and R4 are independently selected from the group consisting of H, F, Cl, Br, C₁-C₄-alkyl and C₁-C₄-

alkoxy, wherein, the C_1 - C_4 -alkyl and C_1 - C_4 -alkoxy are optionally substituted independently of one another by 1, 2, 3, 4, 5, 6, 7, 8 or 9 fluorine atoms;

R2 and R3 are independently selected from the group consisting of H, F, OH, C₁-C₃-alkyl, or C₁-C₃-alkoxy, wherein, the C₁-C₃-alkyl and C₁-C₃-alkoxy are optionally substituted independently of one another by 1, 2, 3, 4, 5, 6 or 7 fluorine atoms;

R5 is independently selected from C_1 - C_4 -alkyl, C_2 - C_4 -alkenyl and C_3 - C_5 -cycloalkyl wherein, the C_1 - C_4 -alkyl, C_2 - C_4 -alkenyl and C_3 - C_5 -cycloalkyl are optionally substituted by 1, 2, 3, 4, 5, 6, 7, 8 or 9 fluorine atoms; and

R6 and R7 are independently selected from the group consisting of F, Cl, Br, C_1 - C_3 -alkyl or C_1 - C_3 -alkoxy, wherein, the C_1 - C_3 -alkyl and C_1 - C_3 -alkoxy are optionally substituted independently of one another by 1, 2, 3, 4, 5, 6 or 7 fluorine atoms,

15

10

provided that R6 or R7 does not correspond to hydrogen.

- 3. The compound according to claim 1, which is:
- 20 (1H-benzoimidazol-2-yl)(2,6-dichlorophenyl)methylamine;
 - (1H-benzoimidazol-2-yl)(2,6-dichlorophenyl)ethylamine;
 - (2,6-dichlorophenyl)(5-fluoro-1H-benzoimidazol-2-yl)methylamine;

25

35

(1H-benzoimidazol-2-yl)(2,6-dichlorophenyl)isopropylamine;

allyl(1H-benzoimidazol-2-yl)(2,6-dichlorophenyl)amine;

30 (1H-benzoimidazol-2-yl)cyclopentyl(2,6-dichlorophenyl)amine; or

the pharmaceutically acceptable salt, or trifluoroacetic acid salt thereof.

4. A method of inhibiting the activity of sodium-proton exhanger of subtype 3 (NH3) comprising contacting an inhibitory amount of a pharmaceutically effective amount of a compound according to

claim 1 to a patient in need thereof.

- 5. A method of treatment or prophylaxis with a pharmaceutical composition comprising a compound of formula I and/or a pharmaceutically acceptable salt thereof, of claim 1, for a disorder of the respiratory drive, a respiratory disorder, a sleep-related respiratory disorder, sleep apnea, snoring, an acute renal disorder, a chronic renal disorder, an acute renal failure, a chronic renal failure, a disorder of an intestinal function, a disorder of high blood pressure, a disorder of essential hypertension, a disorder of the central nervous system, a disorder resulting from central nervious system overexcitability, epilepsy and centrally induced convulsions, a disorder of an anxiety state, depressions and psychoses, an ischemic state of the peripheral and central nervous system, a stroke, a disorder of acute and chronic damage to a peripheral organ and limb caused by an ischemic event, a disorder of a peripheral organ and limb caused by a reperfusion event, a disorder of atherosclerosis, a disorder of lipid metabolism, a disorder of thromboses, a disorder of biliary function, a disorder of infestation by ectoparasites, a disorder resulting from endothelial dysfunction, a protozoal disorder, malaria, for the preservation and storage of a transplant for a surgical procedure, for use in a surgical operation and an organ transplant, for the treatment of shock, for the treatment of diabetes and late damage from diabetes, for the treatment of a disease in which cellular proliferation represents a primary or secondary cause, and for maintaining health and prolonging life.
- 20 6. The method of claim 5 wherein, the compound or salt is used in combination with one or more other drugs or active ingredients.
 - 7. The method of claim 5 wherein, the drug is for the treatment or prophylaxis of a disorder of the respiratory drive and/or of a sleep-related respiratory disorder.

25

5

10

15

- 8. The method of claim 7 wherein, the sleep-related respiratory disorder is sleep apnea.
- 9. The method of claim 5 wherein, the drug is for the treatment or prophylaxis of snoring.
- 30 10. The method of claim 5 wherein, the drug is for the treatment or prophylaxis of an acute renal disorder, a chronic renal disorder, an acute renal failure, or a chronic renal failure.
 - 11. The method of claim 5 wherein, the drug is for the treatment or prophylaxis of a disorder of an intestinal function.

- 12. A pharmaceutical composition for human, veterinary or phytoprotective use comprising a pharmaceutically effective amount of one or more compounds or a salt according to claim 1.
- 13. The composition of claim 12 further comprising one or more other pharmacologically active5 ingredients or drugs.